

CLAIMS

What is claimed as being new and desired to be protected by LETTERS PATENT of the United States is as follows:

1. A grout injecting/structure anchoring system for solidifying a structure by supporting it from bedrock and filling any subterranean voids which would otherwise cause structural instability, the system comprising, in combination:

a structure susceptible to instability due to any subterranean voids, the structure having a foundation positionable on soil over bedrock;

an L-shaped support bracket adapted to be securely placed under a foundation of a structure with a weight bearing horizontal portion adapted to support the foundation and an aligning vertical portion, the aligning vertical portion having a pair of vertically oriented internally threaded recesses and a vertically oriented unthreaded short sleeve there between, the short sleeve having laterally extending vertical wings, the short sleeve also having an axial length with an upper end and a lower end and an internal diameter;

an intermediate guide tube with an axial length greater than the axial length of the short sleeve, the guide tube having an internal diameter and an external diameter slightly less than the internal diameter of the short sleeve, the guide tube having a lower end and an upper end with a radial projection there

adjacent whereby the guide tube may be slidably received within the short sleeve from its upper end but be limited in its downward movement by the projection contacting the upper end of the short sleeve;

a hollow cylindrical supportive grout tube with an axial length greater than the axial length of the guide tube, the grout tube having an internal diameter and an external diameter slightly less than the internal diameter of the guide tube, the grout tube having a closed lower end and an open upper end whereby the grout tube may be slidably received within the guide tube, the grout tube further having a linear body between its upper and lower ends and with a plurality of equally spaced circular apertures along the length of the linear body and around its circumference;

a lower cross brace positioned above the short sleeve and guide tube and grout tube with unthreaded holes axially aligned with the threaded recesses of the support bracket, the lower cross brace having associated there with threaded cylinders 132 with lower ends coupled to the threaded recesses and upper ends extending through the unthreaded holes and with nuts 134 received by the upper ends of the threaded cylinders above the lower cross brace, the nuts adapted to be rotated for raising the foundation and structure, the lower cross brace also having a central

opening for the flow of grout there through and with an upwardly extending collar;

a pressurized grout dispensing unit with a horizontal section and a vertical coupling section with a lower end adapted to releasably coupled to the upwardly extending collar of the lower cross brace; and

securement components including an upper cross brace receiving at the upper end of the vertical coupling section with two laterally spaced unthreaded bores and an intermediate cross brace received at the lower end of the vertical coupling section with two laterally spaced threaded bores axially aligned with the unthreaded bores of the upper cross brace and with two elongated threaded rods coupled to the threaded bores and extending upwardly through the unthreaded bores and with nuts above the upper cross brace to secure the vertical coupling section to the collar of the lower cross brace, the system adapted to dispense grout thus allowing grout to pass through the apertures of the grout tube and fill any subterranean voids, this filling of the tube and subterranean voids thereby functioning to solidify the grout tube and produce a massive anchoring flange of the filled subterranean void which is coupled to the grout tube to thereby add further support to the building structure.

2. A grout injecting/structure anchoring system comprising:
a support bracket with a horizontal portion and having a pair of threaded recesses and a sleeve there between;

a grout tube having a plurality of apertures along its length; and

a lower cross brace positioned above the sleeve and guide tube and grout tube with unthreaded holes axially aligned with the threaded recesses of the support bracket, the lower cross brace having associated there with threaded cylinders with lower ends coupled to the threaded recesses and upper ends extending through the unthreaded holes and with nuts received by the upper ends of the threaded cylinders above the lower cross brace, the nuts adapted to be rotated for raising the support bracket.

3. The system as set forth in claim 2 and further including:

a guide tube slidably received between the sleeve and the grout tube.

4. The system as set forth in claim 2 and further including:

a pressurized grout dispensing unit with a horizontal section and a vertical coupling section with a lower end adapted to releasably coupled to the upwardly extending collar of the lower cross brace.

5. The system as set forth in claim 4 and further including:

securement components including an upper cross brace receiving at the upper end of the vertical coupling section with two laterally spaced unthreaded bores and an intermediate cross brace received at the lower end of the vertical coupling section with two laterally spaced threaded bores axially aligned with the unthreaded bores of the upper cross brace and with two elongated threaded rods coupled to the threaded bores and extending upwardly through the unthreaded bores and with nuts above the upper cross brace to secure the vertical coupling section to the collar of the lower cross brace.

6. The system as set forth in claim 2 and further including:

a supplemental tube located within the grout tube.

7. A grout injecting/structure anchoring system for solidifying a structure by supporting it from bedrock and filling any subterranean voids which would otherwise cause structural instability, the system comprising, in combination:

a structure susceptible to instability due to any subterranean voids, the structure having a foundation positionable on soil over bedrock;

a hollow cylindrical supportive tube having a first inner diameter and being adapted to be inserted into soil adjacent to

the foundation of the structure and through any subterranean void, the supportive tube having a closed bottom end being provided with a cap and firmly abutted to bedrock there beneath, the supportive tube having an open top end being positioned adjacent to the foundation of the structure, the supportive tube further having a linear body between the top end and the bottom end with a plurality of equally spaced circular apertures along the length of the linear body and around its circumference;

a supplemental tube with an upper end and a lower end slidably received within the supportive tube;

an L-shaped support bracket adapted to be securely placed under a foundation of a structure with a weight bearing horizontal portion adapted to support the foundation and an aligning vertical portion, the aligning vertical portion having a pair of apertures with horizontal bolts adapted to couple the support bracket to the foundation, the support bracket having adjusting elements including vertically oriented internally threaded sleeves and a vertically oriented unthreaded sleeve there between with a cross brace and vertical bolts, each bolt having an upper nut, the support bracket being adapted to hold the foundation at a level desired by a user; and

a pressurized grout dispensing unit coupled to the upper end of the filling tube for dispensing grout through the apertures of the tube beginning adjacent to the lower end thus allowing grout

to pass through the apertures of the tube and fill any subterranean voids, this filling of the tube and subterranean voids thereby functioning to solidify the supportive tube and produce a massive anchoring flange of the filled subterranean void which is coupled to the supportive tube to thereby add further support to the building structure.